IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of

Mitsuhiro INAZUMI   Group Art Unit: 2628

Application No.:   10/724,132   Examiner: R. PRENDERGAST

Filed: December 1, 2003   Docket No.:   117660

For: IMAGE PROCESSING METHOD, IMAGE PROCESSING DEVICE, AND IMAGE
        PROCESSING PROGRAM

PRE-APPEAL BRIEF REQUEST FOR REVIEW

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

A Notice of Appeal is attached. Applicant respectfully requests review of the Final

Rejection mailed July 27, 2007 regarding the above-identified application in light of the

following remarks. Claims 1, 3, 4, 6, 7, 9, 10, 12, 13, 15, 16, 18, 19, 21, 22, 24, 25, 27, 28,

30, 31, 33, 34 and 36-48 are pending in this application. Claims 1, 3, 4, 6, 7, 9, 10, 12, 13,

15, 16, 18, 19, 21, 22, 24, 25, 27, 28, 30, 31, 33, 34 and 36-48 are rejected. This review is

requested for the following reasons.

I.   **Specific Features Recited In The Pending Claims Are Neither Taught, Nor
        Would They Have Been Suggested, By The Applied References**

The Office Action, on page 2, rejects claims 1, 3, 4, 6, 7, 9, 10, 12, 13, 15, 16, 18, 19,

21, 22, 24, 25, 27, 28, 30, 31, 33, 34 and 36-48 under 35 U.S.C. §102(e) as being anticipated

by U.S. Patent No. 6,897,977 to Bright. The Office Action asserts that Bright teaches a

scheme to compress image data with features that are alleged to correspond to the

combinations of all the features recited in independent claims 1, 4, 7, 10, 13, 16, 19, 22, 25,

28, 31 and 34. The analysis of the Office Action fails for at least the following reasons.

Bright does not teach, nor can it reasonably be considered to have suggested, dividing an image to be processed into one or more square areas, dividing each square area into triangular areas, and coding the divided triangular areas, the image processing method comprising: inputting the image to be processed and storing the image; dividing the input image into one or more square areas having side lengths equal to $(2^N) + 1$ pixels (where N is a natural number); recurrently dividing each divided square area into triangular areas; coding the divided triangular areas; and outputting the generated coded data, as positively recited in claim 1. Claims 4, 7, 10, 13, 16, 19, 22, 25, 28, 31 and 34 recite similar features.

For example, Bright does not teach square areas having side lengths equal to $(2^N) + 1$ pixels. The Office Action, with reference to Fig. 4 of Bright, asserts that the smaller squares have 3 pixels on a side and thus the number of pixels is $(2^1) + 1 = 3$. The Office Action, in the Response to Arguments, further asserts that Bright teaches dividing an image without limiting the size of the square areas to a specific size and thus is broad enough to include the above-quoted feature. However, the assertion that Bright may "arbitrarily" generate a square area with the requisite measurements does not establish that the relevant features are anticipated.

MPEP §2131.01 states "A claim is anticipated only if <u>each and every element as set forth in the claim is found</u>, either expressly or inherently described, in a single prior art reference." (emphasis added) *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Bright teaches identifying triangles based on <u>bisection of the parent triangle's hypotenuse</u>, or "subdividing a previous triangle in half" (col. 10, lines 36 and 37), and not based on <u>side lengths equal to $(2^N) + 1$ pixels (where N is a natural number)</u>, as recited in claim 1.

Additionally, the Office Action's interpretation of Fig. 4 is inaccurate. For example, a logical result of the feature of $(2^N) + 1$ pixels (where N is a natural number), as recited in the

pending claims, is square areas having whole number side lengths in terms of pixels. The portion of Fig. 4 that the Office Action alleges corresponds to the above-quoted feature, on the other hand, actually shows fractional side lengths (see Office Action's reproduced Fig. 4). As such, Bright does not teach the above-quoted feature.

For at least the reasons discussed above, Bright does not explicitly disclose these features. Additionally, these deficiencies are not cured by any implication that Bright inherently teaches these features.

To establish inherency, the missing descriptive matter must necessarily be present in the thing described in the reference. Inherency may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient. *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999).

As explained in MPEP §706.02, "a reference used under 35 U.S.C. §102 must teach every aspect of the claimed invention either explicitly or impliedly. Any feature not directly taught must be inherently present." MPEP §2112 states that the Patent Office must provide rationale or evidence tending to show inherency. Citing *In re Robertson*, 169 F.3d 743, 745, 49 USPQ 2d 1949, 950-51 (Fed. Cir. 1990), MPEP §2112 states the standard as discussed above. Additionally, citing *Ex parte Levy*, 17 USPQ 2d 1461, 1464 (Bd. Pat. App. & Inter. 1990), §2112 states "(i)n relying upon the theory inherency, the Examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art" (emphasis in original). The above-quoted standards are not met in this Office Action, at least because relying on a possibility that a reference may "arbitrarily" produce a corresponding feature, which Bright does not, does not satisfy the requirement that the non-explicitly disclosed feature necessarily flows from the teachings of the reference.

II. The Applied References Are Not Combinable In The Manner Suggested By The Office Action

The Office Action, on page 6, rejects claims 37-48 under 35 U.S.C. §103(a) as being unpatentable over Bright in view of U.S. Patent No. 6,704,018 to Mori et al. (hereinafter "Mori"). This rejection is respectfully traversed.

The Office Action concedes that Bright does not teach each corner of each triangular area is a pixel of the image, as recited in dependent claims 37-48. To cure this deficiency, the Office Action asserts that Mori teaches these features. The Office Action summarily concludes that it would have been obvious for one of ordinary skill in the art to combine the applied references in the manner suggested by the Office Action to render obvious at least this feature.

Mori teaches a forming a subpolygon mesh by dividing the unit shape of the surface of an object present in a three-dimensional space into a plurality of subpolygons arranged two-dimensionally (Abstract). Bright teaches an image compression scheme (Abstract). Modifying the invention disclosed in either reference with the features of the invention disclosed in the other reference would render the modified invention unsuitable for its intended purpose at least because the 3-dimensional polygon mesh of Mori would not be obviously compatible with, let alone an obvious modification of, the image compression scheme of Bright. Further, there is nothing that even implies that one of ordinary skill in the art would have been led to make any such combination with any reasonable expectation of success.

III. Conclusion

In summary, the applied references do not teach, nor are they combinable in the manner suggested, and no permissible combination of the applied references can reasonably be considered to have suggested, the combinations of all of the features positively recited in at least claims 1, 4, 7, 10, 13, 16, 19, 22, 25, 28, 31, 34 and 37-48. Further, claims 3, 6, 9, 12,

15, 18, 21, 24, 27, 30, 33 and 36 are also neither taught, nor would they have been suggested, by the applied references for at least the respective dependence of these claims, directly or indirectly, on allowable base claims, as well as for the separately patentable subject matter that each of these claims recites.

In view of the foregoing, Applicant respectfully requests that the Review Panel review the substance of the July 27, 2007 Final Rejection in light of the above remarks. Applicant believes that upon such review, the Review Panel will determine that the applied references do not anticipate, nor would they have rendered obvious, the subject matter of the pending claims. In this regard, favorable reconsideration and prompt allowance of claims 1, 3, 4, 6, 7, 9, 10, 12, 13, 15, 16, 18, 19, 21, 22, 24, 25, 27, 28, 30, 31, 33, 34 and 36-48, are earnestly solicited.

Should the Review Panel believe that anything further would be desirable in order to place this application in an even better condition for allowance, the Review Panel is invited to contact Applicants' undersigned representative.

Respectfully submitted,

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JAO:CJW/clf

Attachment:
    Notice of Appeal

Date: September 18, 2007

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